Academia's Role in Driving Innovation and Social Responsibility

Sam Saguy[1], Cristina Silva[2], Paola Pittia[3] and Gerhard Schleining[4]

[1]Robert H. Smith Faculty of Agriculture, Food and Environment, The Hebrew University of Jerusalem, Israel. E-mail: ssaguy@agri.huji.ac.il

[2]Escola Superior de Biotecnologia, Universidade Católica Portuguesa, Portugal

[3]Department of Food Science, Faculty of Agriculture, University of Teramo, Italy

[4]Department of Food Sciences and Technology (DLWT), BOKU, University of Natural Resources and Life Sciences, Austria

Innovation?

- The lifeline for meeting today/future challenges.
- Creating new jobs & replacing those lost in the recent economic crisis.
- Ensuring standard of living.
- Creating/sustaining competitive advantages.
- Meeting consumers' needs & expectations.

Innovation?

- Unprecedented accelerated knowledge growth & pace (➔time scale collapse).
- "Flat world" accessibility, transparency and collaboration.
- Mounting complexity/cost of technology, research, equipment & resources.
- Crucial issues: population growth, health, aging, obesity, hunger, standard of living….

Europe 2020 Flagship Initiative Innovation Union (SEC(2010) 1161)

"**.. our future standard of living depends on our ability to drive innovation in products, services, business and social processes and models. This is why innovation has been placed at the heart of the Europe 2020 strategy.**"

EUROPEAN COMMISSION

Brussels, 6.10.2010
COM(2010) 546 final

➔ Business not as usual.
➔ We should think differently.
➔ Most people hate change, they fear it.

Innovation?

- No one-acceptable definition.
- Basic research ➔ Invention & novelty
- Creativity, ideas, proposals, …
- New Product Development (NPD)

➔Only ingredients of innovation!

Innovation is

- **A new product, service, technology or business model that satisfies consumer/customer need(s) and can be replicated at an economical cost.**
- **Creates value (tangible/intangible) throughout the value chain.**
- **Expensive, risky & prone to fail.**
- **Requires continuous work & nourishment.**
- **Turns commodity at an ever-growing speed.**

➔Execution/delivery: the only relevant test

Innovation types

Scope:
a. Innovation of product/service
b. Process innovation
c. Organizational innovations

Buzzword?

Closed Innovation

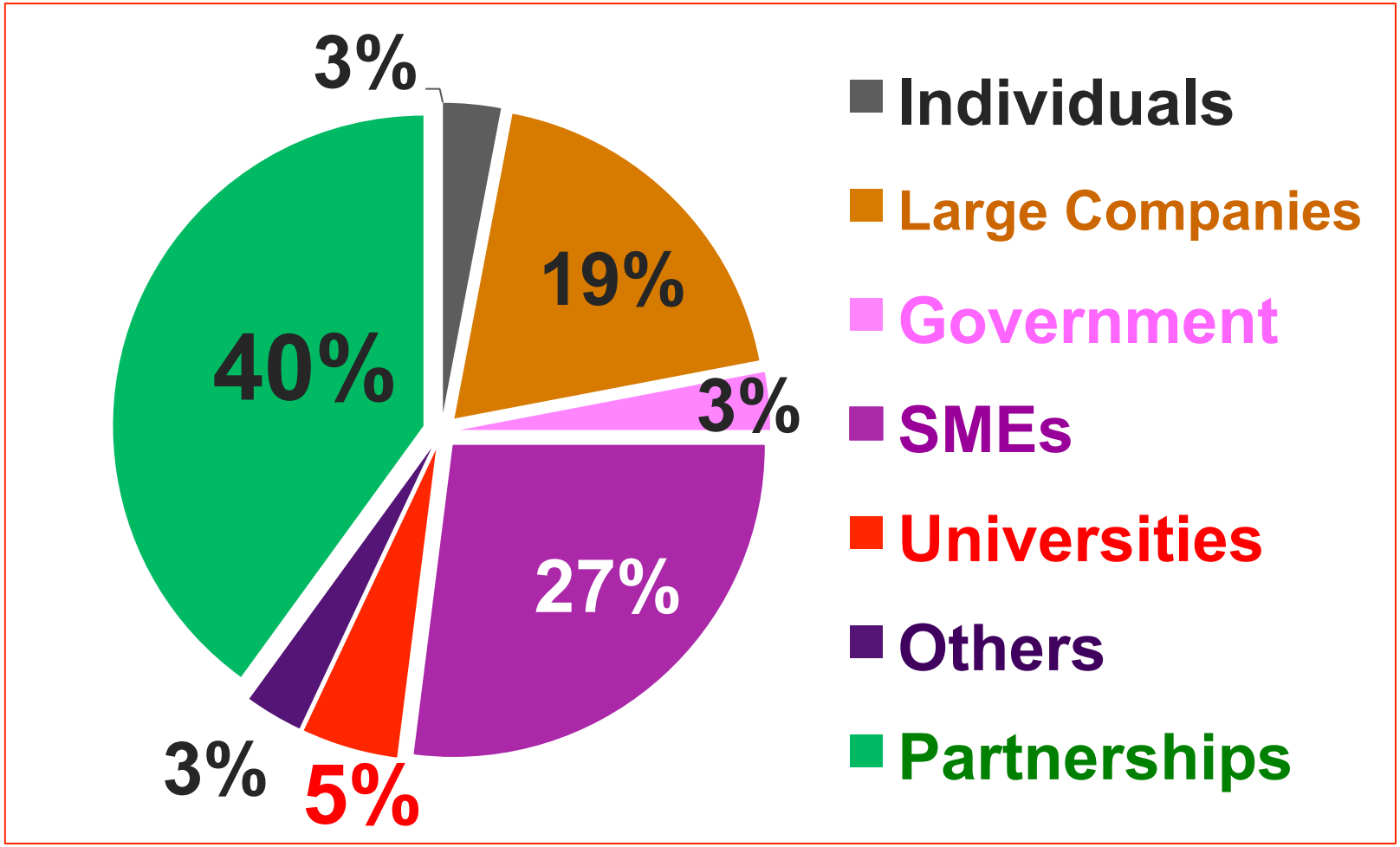
Market impact:
a. Incremental or evolutionary
b. Radical or disruptive (novel product/service)

Origin:
a. Technology driven
b. Attracted by the market

Open Innovation

Novelty:
a. Relative (new to the company)
b. Absolute (new to the market)

In the next 10 years who will drive innovation the most? (GE, 2011)



The Challenge

Academia's roles in addressing innovation future needs

At stake

The future of our students and their/our role in society

"Valley of Death" (Merrifield, BD, 1995)

Technology Management 2(2): 73-83.

Academia

Industry

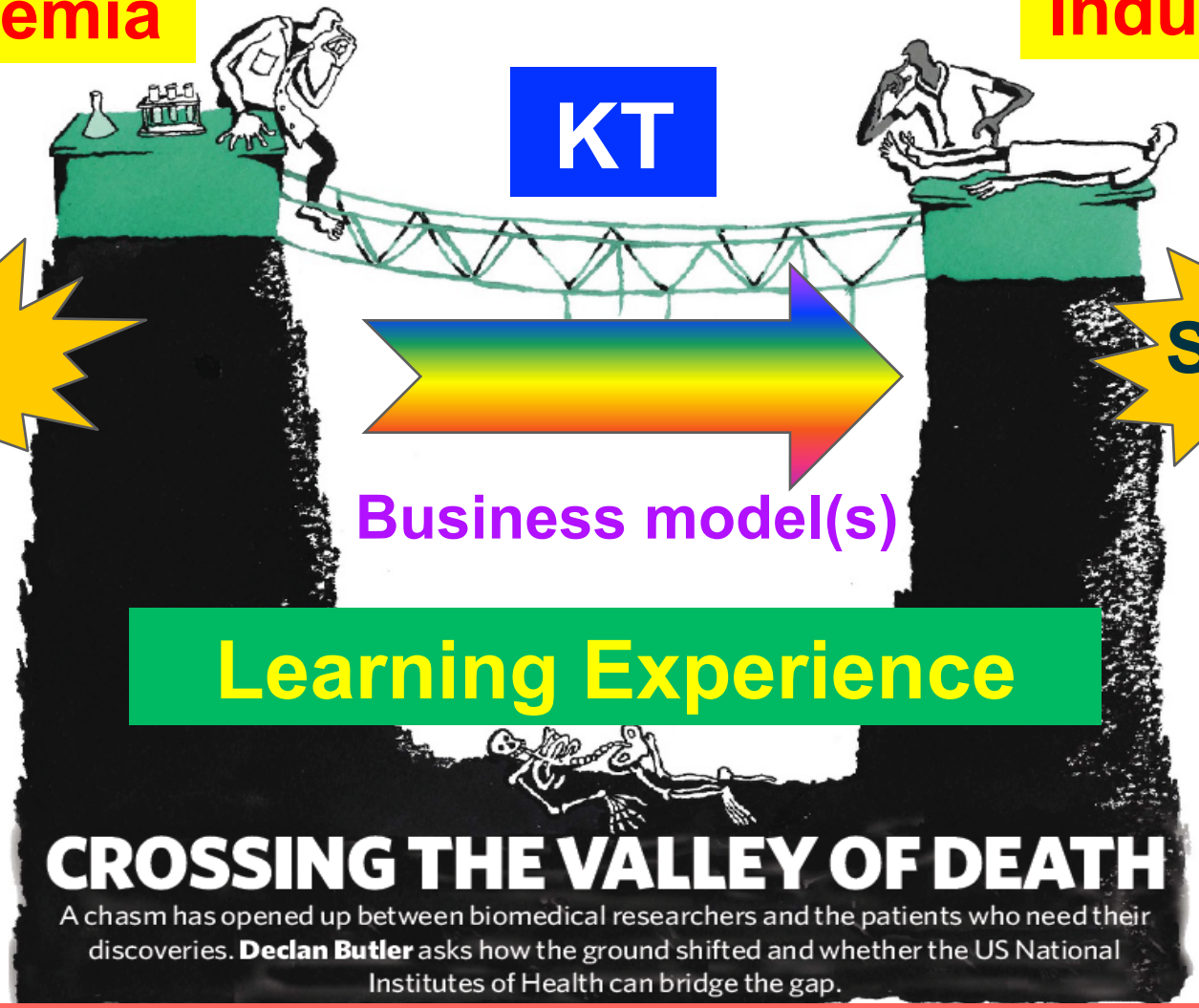
KT

EU

SMEs

Business model(s)

Learning Experience



News Features Translational Research Nature 453 (12 June) 2008

Redefining Academia Roles: 1. Research

- **Basic: excelling is a paramount prerequisite. Yet, it is not sustainable by itself anymore!**
- **Applied: ameliorates research & teaching, students exposure, resources, relevance.**

➔ *Social responsibility.*

Redefining Academia Roles: 2. Education & Learning

- Knowledge needs & tools for coping with the future and a world of constant change.
- New teaching and learning models to gain knowledge (tacit and explicit), and continuously evolve skills.

➔Trust, entrepreneurship and innovation.

Redefining Academia Roles: 3. Reaching out

- Collaboration and open innovation principles (dialog → trust → goodwill → create value).
- Become an organic partner of the I-team(s).
- Conduct PhD, MS theses & internships @ Industry.
- Embrace Industry-people in most A-tasks.
- Become KT ambassadors.

➔Proactive role in promoting collaboration & social responsibility.

What if?

What if the education we teach is not optimal?

What if there is/are different model(s)?

- **A novel approach to learning that can be pursue throughout one's live**
- **Wouldn't be a burden (i.e., fun, sharing, …)**
- **Would excite and engage students in ways that promote eager learning**
- **Would …**

From Push → Pull Institutes

Push (the "past")

Properly forecasting demand for goods, services, education and acting accordingly.

Pull (the "future")

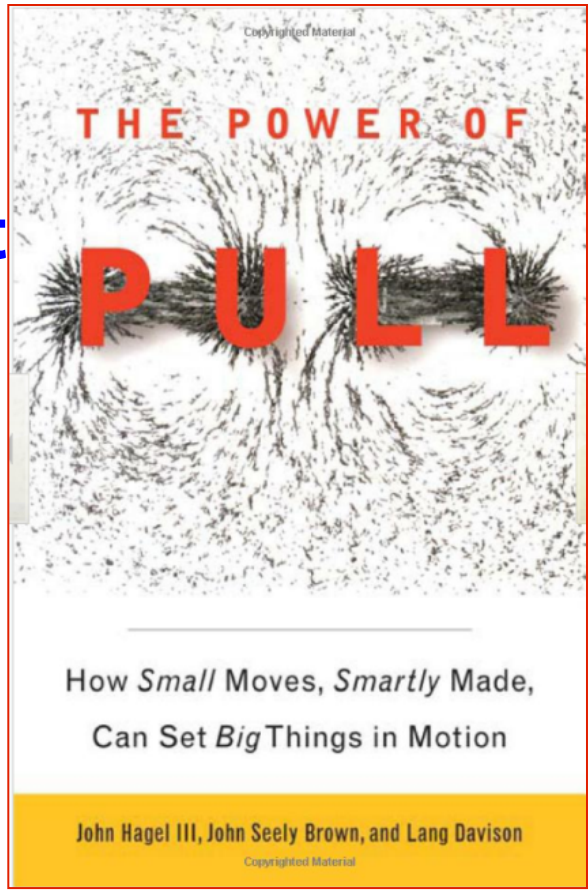
- **Provide platforms that help individuals achieve their full potential.**
- **Access to knowledge promoted by "porous boundaries," disciplines & interfaces, serendipitous connections (possible through technology, digital & social media).**
- **Environments where ideas and passionate people can connect and produce innovation.**

The Power of Pull: 3-Principles (3A)

Hagel, Brown & Davison (2010)

- **Access** (find, learn and connect) with people, products, and knowledge to address unanticipated needs.
- **Attract** people and resources (one didn't even know existed but most relevant and valuable).
- **Achieve** pulling out personal & institutions full potential with less time and greater impact.

➔Revised/new curricula, teaching & learning methods, reinvent and re-innovate our domain.



ISEKI_Food 3 Main Contributions: 1: Virtual Networking Environment

- **Students:** curricula and cost of global food study programs, shared experiences, mobility, internships & job offers.
- **Professionals**
  - **Association & network**
  - **Higher education:** accreditation, curricula, teaching materials, mobility & exchange opportunities.
  - **Food industry:** training, development, academic partners, lab and pilot plant, jobs and internships, events & conference.
- **Databases:** covering the above.

ISEKI_Food 3 Main Contributions
2: International Journal of Food Studies

- International peer-reviewed open-access journal.
- Scientific articles on global Food Education, Research & Industry.
- Dissemination of Food Science and Technology knowledge (education, research & industry).
  - Education, Life Long Learning & E-learning;
  - Research/application (academia & industry);
  - Critical reviews;
  - Exchange of views.

ISEKI_Food 3 Main Contributions: 3. Innovative Teaching Materials and Methods

- Innovative teaching materials database.
- E-Learning modules, teaching materials & database.
- Food4us website and interactive game.
- Books and publications.

www.iseki-food.net/node/119

ISEKI_Food-4 (2011- 2014) Aim

Development of a framework of stakeholders to lead innovation in Food studies education & training fitting enterprises' needs, promoting innovation in the FS&T academic sector, and supporting the EU Food studies internationalization:

- **Education modernization: training and FS&T courses.**
- **Implementation of the labour market role in the 3rd level of education and promoting the employability & entrepreneurship of the FS&T graduates and food professionals.**
- **Lecturing qualification: FS&T teaching staff.**

Future needs

"*We are living on the edge of the future in a crazy place called now*"

Scott Berkun (2010) – "*The Myths of Innovation*"

- **There is no "innovation oracle" or "silver bullet".**
- **The greatest resistant to innovation comes from experienced and confidence people.**

"*Imagination is more important than knowledge*"

A. Einstein

Take Home Message #1

Change

Past Models are no Longer an Option

"*If you're serious about innovation, you have to get serious and systematic about forgetting*"

T. Peters (1999)

"*Abandon yesterday*"

P. Drucker (1999)

➔ From "old order" to new mental models.

➔ We should challenge ourselves, and we need the conviction to make sacrifices (even if it scares the establishment).

Take Home Message #2

Academia role

Leadership and Culture Changes

- **Leadership➔ Vision and strategy to redefine our profession.**
- **Collaboration ➔ Promote alliances, & partnerships (A&A and A&I) to ameliorate cross fertilization, networks and innovation.**
- **Reward independence of thoughts & entrepreneurship.**
- **Forget status quo and/or conformance.**

➔New skills, teaching & learning modes are needed (pull elements; ISEKI-Food 4).

Take Home Message #3

Social Responsibility


Social Responsibility
For a business to create value for its shareholders over the long term, it must also bring value to society
Continuous evolving process

Social Responsibility

- Academia should go beyond basic research.
- Genuine concern for society (jobs, prosperity, standard of living).
- Develop and adopt social model(s):
  - Maximize research IMPACT (science, social & financial)
  - Sharing, co-development, sustainable, innovation, services, KT and TT ..

➔Metrics for quantifying success(es) and reward(s) are needed.

Summary

- Time is precious ➔ act now.
- Embrace change ➔ providing leadership is our duty and responsibility.
- Academia paramount role ➔ embark upon the innovation train that has long left the station.
- Social responsibility and sustainability ➔ essential elements of creating value.

➔We can and will make a difference, and we must not fail to try.

"It doesn't matter where you start, as long as you start" John Cage

Questions?

Sam Saguy

E-mail: ssaguy@agri.huji.ac.il